Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT
For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

1. *Applicant/Contact name and address*: Charles & Nola McCrary
1076 Swanson Lodge Rd
Troy, Mt 59935

2. *Type of action*: Permit to Appropriate Water 76D - 30029539

3. *Water source name*: Swanson Creek

4. *Location affected by action*: Section 34, Township 31N, Range 33W, Lincoln County.

5. *Narrative summary of the action to be taken, proposed project, purpose, and benefits*: The DNRC shall issue a water use permit if an applicant proves the criteria in 85-2-311, MCA are met. The applicants intend to divert water from Swanson Creek via a 24 inch culvert placed vertically in the streambed in the SENWSE of Section 34 T31N R33W. The six foot long culvert has slots in it to take in water, a shut-off valve inside to control flow, and a lid on top. There is a three inch diameter, 1400 feet long PVC pipeline connecting the intake to the power house. The vertical fall in the pipeline is approximately 360 feet, providing between 90 and 110 psi of normal operating pressure to the generator. The power generating system consists of two 4-inch turbines and 16 storage batteries. The turbines produce about 3000 watts of DC power continuously. The system includes two inverters that can supply 20,000 watts of short-term peak AC power. After the water is used for power generation, it will be discharged through four 4-inch PVC pipes into a 1.40 acre pond with a maximum depth of 12 feet, with an approximate volume of 8.4 acre-feet. The purpose of the project is to supply the applicant with power via the generator, and provide water for a pond used for fish and wildlife. The appropriator will benefit from the generation of power to supply his home with electricity, and increase the aesthetics of his property by having a pond containing trout and attracting other wildlife.

6. *Agencies consulted during preparation of the Environmental Assessment: (include agencies with overlapping jurisdiction)*

Fish, Wildlife & Parks
State Historic Preservation Office
Montana Natural Heritage Program
Montana Department of Environmental Quality

Part II. Environmental Review

1. Environmental Impact Checklist:

PHYSICAL ENVIRONMENT

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity *- Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.*

Determination: The source is not identified as chronically or periodically dewatered by DWFP. However, the applicant mentioned that Swanson Creek has historically flowed into a sink approximately 500 to 2000 feet below the requested point of diversion. The streambed below the diversion is dry in most years. Diverting 140 gpm out of the stream will worsen the dewatered condition between where the water is diverted and where it is returned to the stream from the pond outlet.

Water quality *- Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.*

Determination: Swanson creek is not listed by DEQ as water quality impaired or threatened. Use of the water for power generation and a fish pond may increase the temperature of the water and increase the risk of contamination of the source.

Groundwater *- Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.*

Determination: The applicant states the entire system is a non-consumptive use of water. All of the water diverted will be returned to the streambed below the pond outlet.

DIVERSION WORKS *- Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.*

Determination: The project will divert 140 gpm from the natural bed of Swanson Creek. The applicant estimates the yearly minimum flow of the creek is approximately 251 gpm. Reducing the flow of the stream by over fifty percent may have a detrimental affect to the riparian area between the diversion point and the outlet from the pond 2000 feet downstream.

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species *- Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or "species of special concern."*

Determination: The Montana Natural Heritage Program (NHP) was contacted to determine proximity of threatened or endangered species, if any. The NHP indicated the area is habitat for the Grizzly Bear and Canadian Lynx. Construction of the pond may actually benefit both species by providing water and attracting prey species to the area.

Wetlands - *Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.*

Determination: This development is not in a wetland area.

Ponds - *For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.*

Determination: The project includes a pond for fish and wildlife use. It may benefit existing wildlife and waterfowl. The applicant intends to maintain 450 1-pound trout in the pond. A fish stocking permit from Department of Fish, Wildlife & Parks is required to introduce the fish. Only native species should be permitted in the pond. Wildlife inhabiting the riparian area below the point of diversion may have to use the area around the pond instead.

GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE - *Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.*

Determination: Construction of the pond should not degrade soil quality or stability. There may be an increase in moisture content around the pond, and a decrease below the point of divesion.

VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS - *Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.*

Determination: Riparian habitat between the point of diversion and the outlet from the pond may be adversely affected. Caution must be taken to ensure noxious weeds will not be introduced into the pond environment. Wetland habitat for wildlife will be created around the perimeter of the pond.

AIR QUALITY - *Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.*

Determination: There should be no adverse effect to air quality due to the project.

HISTORICAL AND ARCHEOLOGICAL SITES - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project.*

Determination: The State Historic Preservation Office did not identify any historic or archeological sites in this section.

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY - *Assess any other impacts on environmental resources of land, water and energy not already addressed.*

Determination: The applicant will benefit from the energy produced by the power generation system.

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS - *Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.*

Determination: The project is consistent with the land uses of the area.

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES - *Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.*

Determination: There will be no impact to the quality of recreation or wilderness activities nor will access be denied to any established recreation areas.

HUMAN HEALTH - *Assess whether the proposed project impacts on human health.*

Determination: There should be no adverse impact to human health from the project.

PRIVATE PROPERTY - *Assess whether there are any government regulatory impacts on private property rights.*
Yes___ No_X_. If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.

Determination: Private property rights are not impacted or regulated by this proposed action. The right to use water belonging to the State of Montana will become a property right if approved.

OTHER HUMAN ENVIRONMENTAL ISSUES - *For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.*

Impacts on:

(a) Cultural uniqueness and diversity? No

(b) Local and state tax base and tax revenues? No

(c) Existing land uses? No

(d) Quantity and distribution of employment? No

(e) Distribution and density of population and housing? No

(f) Demands for government services? No

(g) Industrial and commercial activity? No

(h) Utilities? Creation of a private power generation facility will reduce the need for public electrical utilities to extend to the area.

(i) Transportation? No

(j) Safety? No

(k) Other appropriate social and economic circumstances? No

2. ***Secondary and cumulative impacts on the physical environment and human population:*** There should be little if any impact on the physical environment and human population from this project.

3. ***Describe any mitigation/stipulation measures:*** There are no mitigation/stipulation measures necessary for the action being requested of this agency.

4. ***Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:*** No action would increase the cost of providing power to the residence and reduce the applicant's enjoyment of his property. The size of the pond could be reduced to lessen evaporation and the risk of potential contamination.

PART III. Conclusion

Based on the significance criteria evaluated in this EA, is an EIS required? No

If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action: No significant impacts have been identified, therefore an EIS is not necessary.

Name of person(s) responsible for preparation of EA:

Name: James Albrecht
Title: Water Resources Specialist
Date: February 14, 2008